9. Comparative Study of Multimedia Emphasis in Educational Reform between Japan and The Kingdom of Thailand

(日本とタイ王国における教育改革でのマルチメディア活用の比較研究)

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In this report, authors clarified the enhancement points concerning multimedia issues which were embedded in the Educational Reform Program in Japan and Educational Development Plan in The Kingdom of Thailand, and summarized now and near future technological activities in higher education institutions. In addition, we elucidated the similarities and differences of both countries.

日本の教育改革計画とタイ王国の教育発展計画に盛り込まれているマルチメディアに関する事項を明確にした。そして、現状および近い将来の両国の高等教育におけるメディア活用の見通しについてまとめた。さらに、両国の類似点および相違点についても説明した。

Keywords: Educational Reform, Multimedia, Thailand, Curriculum, Educational System

キーワード：教育改革、マルチメディア、タイ王国、カリキュラム、教育システム

1. Educational Reform in Japan（日本の教育改革プログラム）

1-1. Program for Reform（改革プログラム）

On January 24, 1997, MOESSC (Ministry of Education, Science, Sports and Culture) informed the actual plan of educational reform. Thereon, the plan was revised on August 5, 1997 (MOESSC, 1997), According to the plan, it aims society that allows everyone to have one's dream or goal, and that encourage everyone to fully demonstrate one's creativity and challenge spirit that is essential for us. In implementing the educational reform, and MOESSC mentioned the following focuses for implementing the educational reform.

- Educating people well for the Japanese future
- Giving high respect for each child's individuality as well as to cultivate his/her sincere

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respect for life and other people, sympathy, sense of justice and equity, sense of moral, sociality, creativity and inter nationality

Then MOESSC reckoned the following points to be of utmost importance.

- Promoting various and flexible measures as much as possible in educational system
- Looking outside beyond the school's frame of reference to acquire broader views, and tackle the tasks of educational reform with such an open attitude

Under these thoughts of the educational reform program, MOESSC set the following five reform points.

1) Cultivate of rich humanity and reform of educational system
2) Prompt responses to changing social needs
3) School's active cooperation with communities
4) Promotion of internationalization by student exchange and other measure
5) Setting up a forum with business community for the expansion of the educational reform movement

1-2. Enhancements (推進)

It can be found a few statements concerned technological media utilization shown in educational reform program.

In 1), there is a statement; "Utilization of multimedia resources in higher education." Concerning to this, MOESSC is preparing the effective distance learning system at graduate school level, in response to the growing social expectation for continuing education. And multimedia resources are intended to be promoted to utilize in higher education by National Institute of Multimedia Education. Accordingly, enhancement of the multimedia utilization is intended to provide every higher education institute. In addition, it can be found the statement; "Enhancement of scientific research condition of private university." MOESSC intended to provide financial support to private university which can promote improvement of information infrastructure by accelerating the campus local area network, and promoting a pilot education and research project which utilize multimedia resources such as a communication network via satellite communication.

Concerning 2), MOESSC mentions to take measures for education for the aging society with decline birth rate, training programs for promising talents in the field of science and technology, scientific researches in response to social needs, appropriate response to information oriented society, and so on. Then, MOESSC intends to provide and diffuse the Science Information Network (SINET) and improve Universities' campus information network (Campus LAN), And MOESSC promotes improvement and provision of scientific information database, and establishing electronic library function in university libraries. On the other hand, it can be seen the statements of enhancement, that is, to improve the quality of information processing education and to disseminate information of lifelong

learning via Internet.

It could be found a few enhancement points through the reform plan. However, when we look over the funding plan for education, some expenditure plans that are connected to the other reform points can actually be seen. Then, the study reported in this article summarized now and the near future technological activities through the educational reform of both countries and tried to describe the materials which clarify the similarity and difference of crucial points.

1-3. Actual Plan on 1997 (97年度計画)

It can be seen some multimedia utilization in higher education institution through the expenditures plan of 1997 (Naigai Kyouiku, 1997).

a) 51 million yen for renewal for the Multimedia Education Development Center which is an institute to promote utilization of multimedia.

b) 4,648 million yen for promoting multimedia education including multimedia university pilot project.

c) 260 million yen for Joint Satellite Project of private universities which supports educational research of multimedia utilization including satellite and mobile information network.

d) 181 million yen for introducing facilities for Internet in universities and colleges of technology to support students to gain information of job, syllabus and scholarship loans.

e) 11 million yen for information system for student service, which introduces systematic information for searching jobs.

MOESSC set "multimedia" as the target objective for IT issues of educational reform. Then, it can be found that multimedia were the center through expenditures plan (Table 1).

1-4. Funding (財源)

The total operating expenses of universities, junior colleges, and colleges of technology in Japan amounted to 7,028,516 million yen in fiscal 1994: 2,807,543 million yen for national institutions, 573,948 million yen for local public institutions, and 3,647,025 million yen for

Table 1 : Enhancement seen in Actual Plans

Plan	Multimedia	Network (Internet)	Database	Satellite
a)	○	○	○	○
b)	○	○		
c)	○	○		○
d)	○	○	○	
e)	○	○	○	

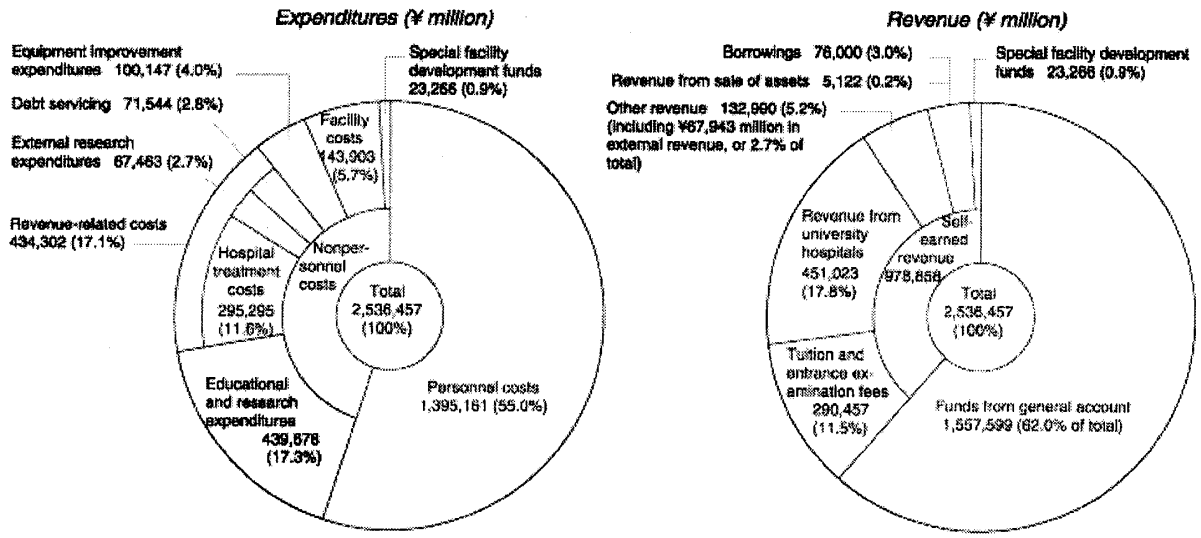

Figure 1 : Breakdown of the Special Account for National Educational Institutions (Fiscal 1995) (From MOESSC, 1995)

private institutions (MOESSC, 1997b), The main source of funding for national and local public institutions is allocations from the national budget or the budgets of local governments, augmented by tuition and other student fees. Private institutions receive subsidies from the central government and local governments, but their main source of funding is tuition and other student fees. In fiscal 1997, the special account budget for national institutions was 2,684,839 million yen. The largest source of funding for the special account was transferred from the general account, which amounted to 1,550,000 million yen (58% of total funding) (Naigai Kyouiku, 1997). Expenditures plan of 1995 fiscal year was reported with details shown in Figure 1 below.

1－5．Enrollment Ratio（進学率）

Figure 2 shows the percentage of the age group going on to universities and junior colleges. If colleges of technology and special training colleges are included, the percentage rises to 64.7%.

In addition to the quantitative expansion of higher education, there have been increases in the number of adult students and students from foreign countries. Consequently, the students who throng campuses are more varied than their predecessors in abilities, interests, concerns, careers, motivations, and other characteristics. Therefore, higher education must respond to the changing needs of a diverse student population. From the data of fiscal 1994, approximately 40 percents of universities had made education in information processing compulsory for all students, and approximately 80 percents of universities had special classroom which could dedicate to learn not only informatics education but also self-paced learning with computer (MOESSC, 1995).

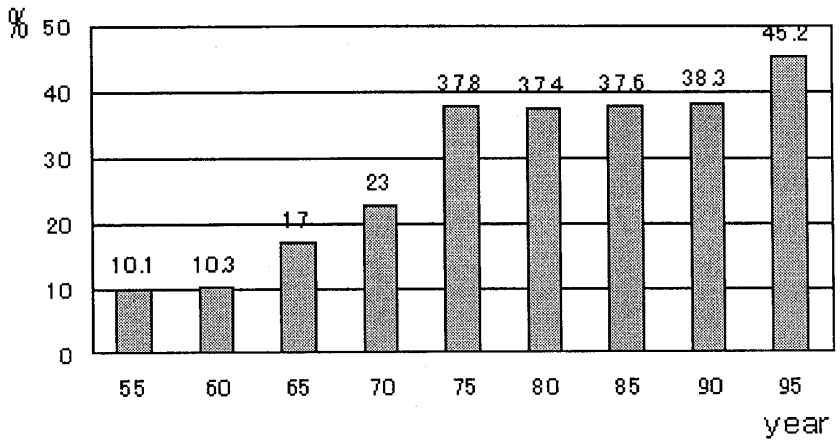

Figure 2 : Enrollement Ratio of Universities and Colleges (Applied from MOSSE, 1995)

Table 2 : The Numbers of Higher Education Institutions

Japan (MOESSC, 1997 c)			Thailand*1		
MOESSC	Colleges of Technology	62	Ministry of University Affairs	Public Universities Independent Public Universities	21 2
	Junior Colleges	598		Private Universities	37
	Universities	576	Ministry of Education	Rajabhat Institutes	36
	Special Training Colleges	3512		Physical Education Colleges	17
				Public Vocational Schools	185
				Buddhist Monk Colleges	2
				Rajamongkala Institues	39
				Fine Art Colleges	15
				Private Vocational Schools	208
	Miscellaneous Schools	2714	Other Ministries	Schools/Colleges with Special Fields	67

*1 Adapted from ONEC, 1997a, pp.10-13.

2 . Rationale of Countries (両国の高等教育の概要)

The numbers of higher education institutions in both countries are shown in Table 2 below.

3．Thailand Education System（タイ王国の教育システム）

At present, Thailand education system is composed of four educational levels: pre-school, primary, secondary and tertiary. Six years at the primary school level is compulsory. Three years at the lower secondary school and another three years at the upper secondary school level are followed. For the tertiary education, at the bachelor's degree level, generally, takes four years. The master's degree takes approximately two years. In addition, it takes at least three years for doctoral degree.

3－1．Educational Administration（教育行政）

There are several ministries directly or indirectly involved in the development and implementation of education in Thailand (ONEC, 1997b). Four main ministries are responsible for educational management in Thailand. These include the Prime Minister Office, the Ministry of Education, the Ministry of University Affairs and Ministry of Interior.

Under the Prime Minister Office, there are three bodies in relation to educational policies and planning: 1) the Office of the National Economic and Social Development Board (ONESDB) is responsible for formulating the national economic and social development, 2) the Office of the National Education Commission (ONEC) is responsible for policy making and planning of education at all levels. These include the National Educational Scheme and the 5-year National Education Development Plan, and 3) the Budget Bureau where allocation of the government budget is considered in accordance with policies and planning initiated by the first two offices.

The Ministry of Education is responsible for the management of education at all levels from pre-primary education to secondary, post-secondary and some types of tertiary education. The tertiary education under the supervision of this Ministry includes Rajabhat Institutes, physical education colleges, technology institutes, Bhuddhist monk colleges, public and private vocational schools, dramatic arts and fine arts colleges.

The Ministry of University Affairs administers and supervises higher education in public and private colleges and universities.

The Ministry of Interior is responsible for administering and managing primary education in the municipalities of provinces in Thailand.

In addition to ministries mentioned, there are six other ministries providing education in specialized fields or for special purposes, both in the formal and non-formal systems.

3－2．Higher Education（高等教育）

Higher education in Thailand composes of both state and private universities, professional colleges (teachers' colleges, colleges of physical education, technical colleges) and polytechnic institutes. The total enrollment ratio in higher education is estimated to be 16.4 percent, increasing from 12.1 percent in 1990 (Figure 3).

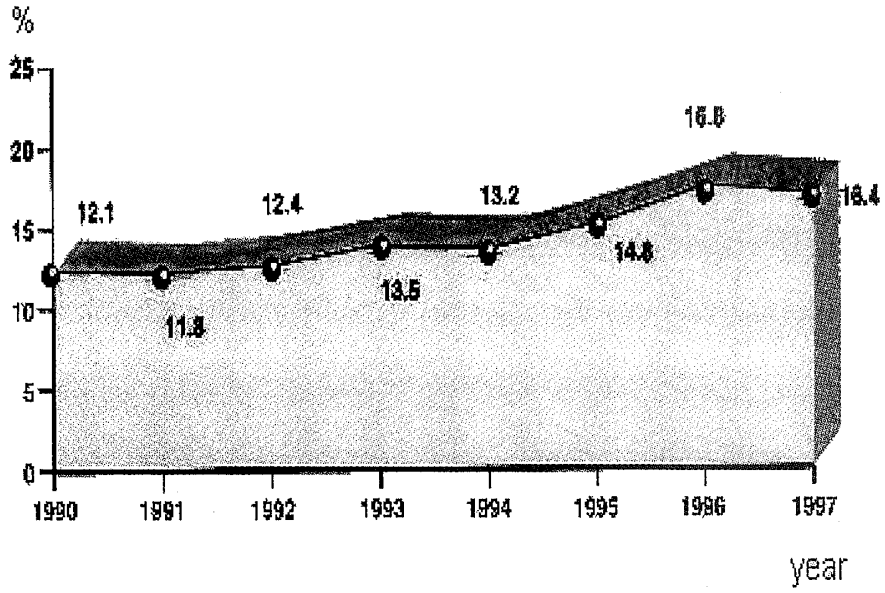

Figure 3 : Enrollement Ratio at Higher Level: Academic Year 1990-1997

The higher education institutes can be categorized by means of mission-oriented system (ONEC, 1997b). This includes three sub-systems: 1) community college system, offering two-year programs for upper secondary school graduates, 2) higher education institution system, offering four-year bachelor's degree programs emphasizing on teaching and academic services, and 3) research university system, emphasizing on research and development and the production of master's degree and doctorate graduates.

The university is governed by the university council in which a prominent scholar or a recognized person is customarily appointed president of the council, and the rector or president of the institution is vice-president of the council. The university/college council oversees policy planning and regulates the affairs of the institution on almost every aspect. However, the college for vocational and technical training does not have this type of council, but are directly controlled by the Ministry of Education (Tongsopit, 1992).

State universities offer courses and degree programs in a variety of fields. Private universities and colleges, on the other hand, tend to be more oriented to technological/vocational education.

In terms of the share of the educational budget for higher education, when grouped together with the Teacher Education and Vocational Education, in 1997, it came up to about one-forth of the country total educational budget (Figure 4). Particularly, in the part of higher education, ONEC reports that it has been raised substantially between 1987 and 1997 (ONEC, 1997b).

Almost all of the public universities manage their budget under the supervision of the MUA. However, at present, Thailand has two public universities which manage their budget independently from the government bureaucracy with its own autonomous adminis-

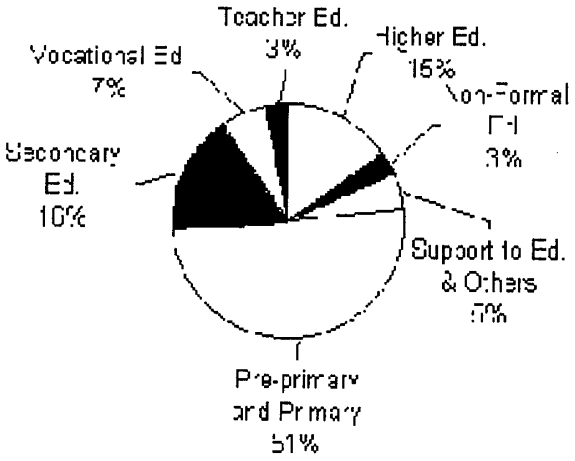

Figure 4：Percentage Distribution of Educational Budget by Function, 1997 (Adapted from ONEC, 1997b, p.155)

tration system and with government financial support in the form of block grants. The two universities mentioned are Suranaree University of Technology and Walailak University.

3－3．Educational Development and Reform（教育開発および改革）

Education in Thailand has been and being implemented in accordance with the Seventh National Education Development Plan (1992-1996) and the Eighth National Education Development Plan (1997-2001). In terms of education reform, there has been several organizations proposed the reforms. These include The Office of National Education Commission (ONEC), the Ministry of Education, the Ministry of University Affairs and the Commission on Thailand's Education in the Era of Globalization: Towards National Progress and Reforms and Security in the Next Century. ONEC (1997b) concludes in its analysis of the reforms from various sources mentioned that there was consistency among these reforms.

Of all the organizations proposed the educational reforms, ONEC is a major task force. In addition to policy development and formulation of the national education plan, ONEC is responsible for proposing policy directives and other recommendations, which are not yet endorsed in the National Scheme of Education or National Education Development Plan. Reform of education was deemed crucial to prepare Thailand for facing the changing world. ONEC proposed both the reforms of the entire education system and specific issues. Higher education reform was one of ONEC's proposals on specific issues.

Concerning the higher education reform, according to the ONEC, its proposal which included the principles of the reform was approved by the Council of Ministers in August 27, 1996 (ONEC, 1997b). Within the total of four principles, the emphasis on multimedia/ technology can be seen in the first principle. That is the principle of unity amid diversity. In this principle, ONEC included the strategy of enhancing interrelationship as a network

for linking and transferring to each other. At present, the ONEC is in the process of formulating the implementation plan of the reform. Thus, it is too soon to speculate on the media utilization within this reform.

In this study, the purpose is to compare the Higher Education Reform of the two countries, Japan and Thailand, in which the objectives and the actual implementations are observed in relation to the media/technology enhancement. Therefore, on the Thai part, what is considered valuable is to look for the plans that reflect the National Education plans and incongruent with the recent proposed educational reforms. In addition, the plans cover the total process of the scope in this study.

The Information Technology Network for Education Development at the Higher education Level Project (the IT Campus Project) is one of the examples that can be used in this present study. The project was initiated by the Ministry of University Affairs in 1995 (MUA, 1997a). The Ministry formulated the Nation's first long term plan for higher education (1990-2004) and parts of this was incorporated into the Seventh National Higher Education Development Plan spanning the years 1992 to 1996 (MUA, 1997b, Srisa-An, 1996). Both of these plans take a more aggressive and dynamic approach in responding to changes in the global environment. The emphasis places on equality, excellence, efficiency and internationalization.

There are four objectives in the IT Campus Project (MUA, 1997a):

1) To enhance the implementation in accordance to the policy of distributing the higher education opportunity to the rural areas
2) To search for the high performance computing and communication network
3) To develop the self-learning center
4) To incorporate the educational resource utilization efficiently and economically.

3-4. Actual Implementations (教育実施計画)

3-4-1. Technology Network and Long Distant Classroom (ネットワークと遠隔教育)

In 1996, the project received the initial budget of 110 million baths (363 million yen). IT campuses were set up in 7 provinces. The center of the campuses is at the office of permanent secretariat of the Ministry of University Affairs. In 1997, the budget of 100 million baths (330 million yen) was allocated to the project. However, the actual amount was readjusted to 88 million baths (290 million yen). In this phase, the aims were:

a) To formulate the high speed information infrastructure to connect among the 23 public universities
b) To expand academic cooperative network in order to share teaching and learning activities
c) To formulate the line of communication with foreign countries through the Internet

Gateway and to support the IT campuses in 5 provinces which are ready to join the network.

In the next fiscal year (1998), the project proposes 100 million baths (330 million yen) to further the implementations. In this phase, all campuses of all higher education institutes including the open-universities will be connected to the network. The project also will support building up the Campus Network of all institutes to be connected to the UNINET; the educational network which is the Backbone Network.

3-4-2. Academic Activities and Teaching and Learning Media (学術活動と教授学習メディア)

Teaching materials in the form of detailed lesson plans including teaching and learning media together with the evaluations were incollaboratedly created by the instructors in the main university campuses and the instructors positioned in the IT Campuses.

The multimedia/technology utilization as seen in the actual implementations can be summarized in Table 3 below.

Thai economy has experienced an unexpected downturn since 1996 due to the impacts of the slowdown in world trade and poor performance of exports resulting in economic and social crises for the Thai Society (ONEC, 1997b). The country has continued to confront with critical internal economic problems at the present time. As a subsequence, particularly the educational budget planned has been tailored and postponed until the time that the country situation will get better. Therefore, it will be unlikely to project the educational movement at the present time on to the near future.

4. Discussion

Information Technology (IT) has had beneficial effects on university education in a wide variety of educational settings. Therefore, though enhancement of multimedia, it is not enough to cover deeper problems.

- Raw information is not well-being or valuable in itself.
- People are blowing their own information, introducing themselves, responding to the whole group with personal response through Internet without thinking of academic use.

Table 3: Enhancement as seen in the Actual Implementation Plans

Plan	Multimedia	Network	Database	Satellite	Teleconferencing
3-4-1. a)		○		○	○
b)		○	○	○	○
c)	○	○	○		
3-4-2.	○				

Self Directed

Learning

- We can recognize students to become various, however, we are not certain that they know where they are going.

Apparently, it needs further argument of educational methodologies and instructional design, and consequent required development of educational staffs. Then, assumptions made about international comparative study make it seems ideally suited for clarifying different intentions in similar multimedia settings.

It can be found through the comparison of Table 1 and Table 3 that multimedia can be seen throughout the plans in Japan but media are used selectively in Thailand. It might be assumed that Japan aims to adapt to the variety of students by the virtue of multimedia technology, would be the most effective in producing high level performance. However Thailand aims to adapt the needs for enormous increasing enrollments by using effective technological equipment. Although similar IT reform plans could be seen throughout world, these slight differences of how media are intended to be used and how enhancements are described in the plans could be seen. And there are two major strategies within IT campus: efficiency and variety. For instance, "Daring Report" in England is aiming to develop materials for self paced training with computer and adapt large classroom with IT (IT & Dearing, 1997), and "Goals 2000 Agenda" in U. S. is aiming to use multimedia to support various activities of students (U. S. Department of Education, 1996). However, enhancements concerning individualization and self directed learning are seen as well. Therefore, it must be crucial to research students' learning and develop the way to support their activities.

付　記

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